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Docket No.: 050341-0046

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:	Customer Number: 20277
	:	
Maxine MCCALL, et al.	:	Confirmation Number: Not yet assigned
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Application No.: 10/526,050 ✓	:	Group Art Unit: Not yet assigned
	:	
Filed: February 28, 2005	:	Examiner: Not yet assigned
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For: METHODS FOR THE CHEMICAL AND PHYSICAL MODIFICATION OF NANOTUBES, METHODS FOR LINKING THE NANOTUBES, METHODS FOR THE DIRECTED POSITIONING OF NANOTUBES, AND USES THEREOF

INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In accordance with the provisions of 37 C.F.R. 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached form PTO-1449. It is respectfully requested that the references be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

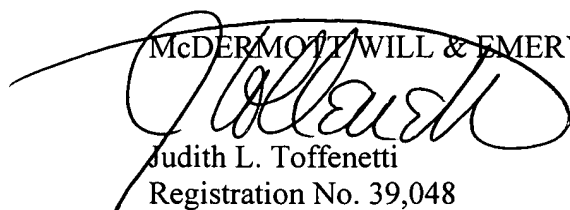
This Information Disclosure Statement is being filed within three months of the U.S. filing date OR before the mailing date of a first Office Action on the merits. No certification or fee is required.

Each English language reference was cited in a corresponding foreign application search report or office action and its relevance discussed therein. A copy of the foreign search report or office action is attached for the Examiner's information.

10/526,050

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,


McDERMOTT WILL & EMERY LLP
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Date: July 7, 2005

**Please recognize our Customer No. 20277
as our correspondence address.**

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		US 6,362,011 B1	03/26/2002	Massey et al.		
		US 6,555,362 B2	04/29/2003	Hidaka et al.		
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		WO 02/20179 A2	03/14/2002	Wisconsin Alumni Research Foundation		
		WO 97/33176	09/12/1997	Igen, Inc.		
		WO 99/57564	11/11/1999	Commissariat A L'Energie Atomique et al.		
		WO 02/079514	10/10/2002	The Trustees of Boston College		
		WO/ 01/07101 A1	02/01/2001	TFX Medical Extrusion Products		
		DE 100 38 124 A1	08/04/2000	Infineon Technologies AG		
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)						
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		ZHENG, Ming et al., "DNA-assisted dispersion and separation of carbon nanotubes" Nature Publishing Group 2003 (p. 338-342)				
		PATTAROTTO, D. et al., "Synthesis, Structural Characterization, and Immunological Properties of Carbon Nanotubes Functionalized with Peptides", J. Am. Chem. Soc. 2003, 125, 6160-6164				
		BOUTORINE, Alexandre S. et al., "Fullerene-Oligonucleotide Conjugates: Photo-induced Sequence-Specific DNA coverage", Chem. Int. Ed. Engl. 1994, 33, No. 23/34 (p. 2462-2464)				
		MOONSUB, Shim, "Functionalization of Carbon Nanotubes for Biocompatibility and Biomolecular Recognition", Nano Letters 2002, Vol. 2, No. 4, 285-288				
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		WO 95/01448	01/12/1995	DCV Biologics L.P.			
		WO 03/010837 A1	02/06/2003	Technische Universiteit Delft			
		WO 97/32571	09/12/1997	Hyperion Catalysis International, Inc.			
		WO 02/095099 A1	11/28/2002	Stanford University			
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		DA Ros, T. et al., "Fullerene Derivatives as Potential DNA Photoprobes", Aust. J. Chem. 2001, 54 223-224					
		GEORGAKILAS, V. et al., "Organic Functionalization of Carbon Nanotubes", J. Am. Chem. Soc., Vol. 124, No. 5, 2002 (p. 760-761)					
		HOLIZINGER, M. et al., "Sidewall Functionalization of Carbon Nanotubes", Angew Chem. Int. Ed. 2001, 40, No. 21 (p. 4002-4005).					
		COLEMAN, Karl S. et al., "Functionalization of Single-Walled Carbon Nanotubes via the Bingel Reaction", J. Am. Chem. Soc. 2003, 125, 8722-8723					
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		http://www.affymetric.com/technology/manufacturing/index.affx					
		STAR, Alexander et al., "Electronic Detection of Specific Protein Binding Using Nanotube FET Devices", Nano Letters 2003, Vol. 3, No. 4, (p. 459-463)					
		MCKNIGHT, Timothy E. et al., "Intracellular integration if synthetic nanostructures with viable cells for controlled biochemical manipulation", Institute of Physics Publishing - Nanotechnology 2003					
		JIANG, Kuiyang et al., "Selective Attachment of Gold Nanoparticles to Nitrogen-Doped Carbon Nanotubes", Nano Letters, Vol. 3, No. 3, March 2003					
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		PARK, So-Jung et al., "Array-Based Electrical Detection of DNA with Nanoparticle Probes", Science Mag Science, Vol. 295, 22February2002. LI, J. et. Al., "Highly ordered carbon nanotubes arrays for electronic applications", Appl. Phys. Lett., Vol. 75, p. 367-369, (1999)					
		ZHANG, Hua et al., "Fabrication of Sub-50-nm Solid-State Nanostructures on the Basis of Dip-Pen Nanolithography", Nano Letters 2003, Vol. 3, No. 1, 43-45.					
		KEMPA, K. et al., "Photonic Crystals Based on Periodic Arrays of Aligned Carbon Nanotubes", Nano Letters 2003, Vol. 3, No. 1, p. 13-18, 2003 American Chemical Society					
		AVERDUNG, J. and MATTAY, J., "Addition of Photochemically Generated Acylnitrenes to C ₆₀ . Synthesis of Fulleroaziridines and Thermal Rearrangement to Fullerooxazoles", Tetrahedron, Vol. 51, No. 9, (p. 2543-2552), 1995					
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		LI, J. et al., "Carbon Nanotube Nanoelectrode Array for Ultrasensitive DNA Detection", Nano Letters 2003, Vol. 3, No. 5, (p. 597-602)					
		DWYER, Chris et al., "DNA-functionalized single-walled carbon nanotubes", Institute of Physics Publishing Nanotechnology 13 (2002) (p. 601-694)					
		NGUYEN, Cattien V., "Preparation of Nucleic Acid Functionalized Carbon Nanotube Arrays", Nano Letters 2002, Vol. 2, No. 10, (p. 1079-1081)					
		DAGANI, Ron, "Sticking things to Carbon Nanotubes", News of the Week Science, 7 May 2001, Vol. 79, No., 19					
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		WILLIAMS, Keith A., "Carbon nanotubes with DNA recognition", Nature Publishing Group 2002, Vol. 420, (19/26 December 2002)				
		SERVICE, Robert F., "Biology Offers Nanotech's A Helping Hand", Science, Vol. 298, p. 2322-2323, (20 December 2002)				
		HAZANI, Miron et al., "Confocal Fluorescence Imaging of DNA-Functionalized Carbon Nanotubes", Amer. Chem. Soc. 2003, Nano Lett. Vol. 3, No. 2, 2003 (p. 154-155)				
		BAKER, Sarah E., et al., "Covalently Bonded Adducts of Deoxyribonucleic Acid (DNA) Oligonucleotides with Single-Wall Carbon Nanotubes: Synthesis and Hybridization", Amer. Chem. Soc. 2002, Nano Lett., Vol. 2, No. 12, 2002, (p. 1413-1417)				
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		STEVENS, Joel L., "Sidewall Amino-Functionalization of Single-Walled Carbon Nanotubes through Fluorination and Subsequent Reactions with Terminal Diamines", Amer. Chem. Soc. 2003, Nano Lett. 2003, Vol. 3, No. 3 p. 331-336					
		CAL, Hong, "Carbon nanotube-enhanced electrochemical DNA biosensor for DNA hybridization detection", Anal. Bioanal. Chem. (2003) 375: 287-293					
		WILLIAMS, Keith A., "Towards DNA-Mediated Self Assembly of Carbon Nanotube Molecular Devices", Amer. Inst. Of Phys. 2002 (p. 444-448) (October 2002)					
		LIU, Jie, "Fullerene Pipes", Science, Vol. 280, (22 May 1998), (p. 1253-1255)					
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		CIBELLI, Jose B., et al., "Cloned Transgenic Calves Produced from Nonquiescent Fetal Fibroblasts", Adv. Mater. 1999, Vol. 280, (22 May 1998)	
		HAMON, Mark A., "Dissolution of Single-Walled Carbon Nanotubes", Adv. Mater. 1999, Vol. 11, No. 10,	
		CHEN, Robert J., "Noncovalent Sidewall Functionalization of Single-Walled Carbon Nanotubes for Protein Immobilization", J. Amer. Chem. Soc. 2001, Vol. 123, (p. 3838-3839)	
		TSANG, Shik Chi, et al., "Immobilization of Platinated and Iodinated Oligonucleotides on Carbon Nanotubes", Angew Chem. Int. Ed. Engl. 1997, Vol. 36, No. 20 (p. 2198-2200)	

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